

CLINICAL EVIDENCE

Bell's palsy

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None declared

QUESTIONS: What are the effects of medical treatment of Bell's palsy in adults and children? How effective is steroid therapy? How effective is antiviral therapy?

DEFINITION

Bell's palsy is an acute, unilateral paresis or paralysis of the face in a pattern consistent with peripheral nerve dysfunction, without detectable causes.¹ Additional symptoms may include pain in or behind the ear, numbness in the affected side of the face, hyperacusis, and disturbed taste on the ipsilateral anterior part of the tongue.²⁻⁵

INCIDENCE/PREVALENCE

The incidence is around 23 per 100,000 people per year, or about 1 in 60 to 70 people in a lifetime.⁶ It affects men and women more or less equally, with a peak incidence between the ages of 10 and 40. It occurs with equal frequency on the right and left sides of the face.⁷

ETIOLOGY AND RISK FACTORS

The cause is unclear. Viral infection, vascular ischemia, autoimmune inflammatory disorders, and heredity have been proposed as the underlying cause.^{2,8,9} A viral cause has gained popularity since the isolation of the herpes simplex virus-1 genome from facial nerve endoneurial fluid in people with Bell's palsy.¹⁰

PROGNOSIS

More than two thirds of people with Bell's palsy achieve full spontaneous recovery. The largest series of people with Bell's palsy who received no specific treatment (n = 1,011) found the first signs of improvement within 3 weeks of onset in 85% of people.¹¹ For the other 15%, some improvement occurred 3 to 6 months later. The same series found that 71% of people recovered normal function of the face, 13% had insignificant sequelae, and the remain-

Summary points

- A systematic review of randomized controlled trials (RCTs) has found no good evidence that steroids provide long-term benefit
- One RCT found that prednisone was better than acyclovir in improving recovery of facial motor function
- One RCT found that acyclovir was better than placebo in people receiving prednisone

ing 16% had permanently diminished function, with contracture and synkinesis (involuntary movement accompanying a voluntary movement). These figures are roughly similar to those of other series of people receiving no specific therapy for Bell's palsy.^{7,8,12}

AIMS

To maximize recovery of facial function and to reduce the risk of sequelae, with minimal adverse effects.

OUTCOMES

The grade of recovery of motor function of the face, the presence of sequelae (synkinesis, autonomic dysfunction, and hemifacial spasm), and the time to full recovery.

METHODS

We did a *Clinical Evidence* search and appraisal in November 1999. All identified trials were reviewed. Trials used different scoring systems for reporting outcomes. Search date 1995; primary sources were MEDLINE, BIDS, Science Citation Index, and communication with manufacturers and specialists.

QUESTION: What are the effects of treatment in adults and children?

CORTICOSTEROIDS

A systematic review of randomized controlled trials (RCTs) has found no significant difference between ste-

roids and placebo either in the proportion of people achieving good recovery of facial motor function or in the proportion left with permanent sequelae. One poor-quality RCT found that steroids decreased the frequency of synkinesis and autonomic dysfunction.

Benefits

Versus placebo or no specific treatment: We found 1 systematic review (search date 1995, 4 RCTs, $n = 390$, 180 receiving steroids vs 210 controls).¹³ Two of the trials were of good quality, and we found no subsequent RCTs of sufficient quality. The review found that steroids significantly improved the recovery of facial motor function. However, this conclusion was affected by the inclusion of an RCT in which 29% of participants were unavailable for follow-up.¹⁴ If this trial was excluded, the result was no longer significant. Pooled results of the 2 high-quality RCTs ($n = 75$, both double-blind) found recovery of facial motor function in 25 of 38 people taking steroids and 25 of 37 controls (relative risk [RR] 0.97, 95% confidence interval [CI] 0.70-1.33). There was no significant difference in the time to recovery. **Versus acyclovir:** See discussion of antiviral treatment.

Harms

No serious adverse effects were reported in these trials.

ANTIVIRAL TREATMENT

One RCT found that in people receiving prednisone, the addition of acyclovir was better than that of placebo in improving recovery of facial motor function.

Benefits

We found no systematic review. **Versus placebo:** We found 2 RCTs.^{15,16} The first enrolled 119 participants, of whom 20 (16%) were unavailable for follow-up, 53 received acyclovir (400 mg 5 times a day for 10 days), and 46 received placebo. All participants received prednisone. The proportion of people with good recovery of facial motor function was significantly higher in those receiving acyclovir and prednisone combined (49/53 vs 35/46, RR 1.22, 95% CI 1.02-1.45). The difference in the incidence of sequelae was nonsignificant, although there was a trend favoring those receiving acyclovir and prednisone (7/53 vs 13/46, RR 0.47, 95% CI 0.20-1.07).¹⁵ The second trial enrolled 30 patients, of whom 14 received prednisone and acyclovir (200 mg 5 times a day for 10 days) and 16 received only prednisone. All achieved good recovery of facial motor function.¹⁶ **Versus prednisone:** We found 1 RCT.¹⁷ The trial was not blinded or placebo controlled, and the randomization technique was not stated. Of the 113 people enrolled, 12 (10.6%) were unavailable for fol-



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Acute paralysis occurs with equal frequency on the right and left sides of the face of patients with Bell's palsy

low-up, 54 received acyclovir, and 47 received prednisone. Prednisone therapy was associated with a significantly higher rate of good facial motor recovery (44/47 vs 42/54 with acyclovir, RR 0.83, 95% CI 0.71-0.98).

Harms

No serious adverse effects were reported in these trials.

Comment

The final trial comparing the use of acyclovir with that of prednisone was of poor quality and must be interpreted cautiously.¹⁷

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